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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/594,882   | 09/29/2006  | Nils Alveby          | 19200-000068/US     | 3296             |
| 36593 7590 01/21/2010<br>HARNESS, DICKEY & PIERCE, P.L.C.<br>P.O. BOX 8910<br>RESTON, VA 20195 |             |                      |                     |                  |
| EXAMINER   |             |                      |                     |                  |
| HAYES, KRISTEN C   |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/594,882

**Applicant(s)**

ALVEBY, NILS

**Examiner**

KRISTEN C. HAYES

**Art Unit**

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-20 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-20, 22-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the vacuum difference measuring device must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make

and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 13-20 and 22-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

4. Claim 13 recites the limitation of the vacuum difference measuring device adjusting a vacuum level in the space. However, the original specification says that the vacuum level is adjusted depending on the measured vacuum difference, not that the actual device adjusts the vacuum level.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 13-20 and 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 13 claims the control device controlling the vacuum in the space according to a milking criteria and the vacuum difference measuring device adjusting a vacuum level according to the measured vacuum difference. It is unknown how the control device and the vacuum difference measuring device both adjust the vacuum in the space according the different parameters without conflict. The original disclosure of the invention does not mention the vacuum in the space being adjusted depending on these two factors at one time.

8. Claim 13 recites "a vacuum level" in line 11. Is this the same vacuum controlled by the control device in line 7?

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 13, 15, 18, 20, 22, 25 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Duke US 2007/0215053.

11. Regarding claims 13, 15, 25 and 27, Duke discloses a milking machine comprising a first teat cup (1) comprising a teat cup shell (2) and a teat cup liner (3) with the teat cup liner comprising a lower end connecting to a milking vacuum source (Duke, ¶0037: line 16), and a top end forming a space (9) and a teat entrance (7) in which a teat of a milking animal is to be introduced, said teat cup liner further comprising an inlet (13) to the space connected to a source (14)(Duke, Figure 2), wherein a control device controls vacuum in the space in accordance to a milking criteria of the milking animal (Duke, ¶0008: lines 9-14, ¶0052: lines 1-5), said milking machine including a vacuum difference measuring device (Duke, ¶0056: lines 20-24) with the vacuum in said space being dynamically varied during the milking process depending upon the momentary milk flow (Duke ¶0056: lines 20-29, ¶0052).

12. Regarding claim 18, Duke further discloses the milking machine comprising one teat cup for each udder quarter to be milked (Duke, Figure 1) and said control means (103).

13. Regarding claim 20, Duke discloses the vacuum in the space being set dynamically during milking (Duke, ¶0056: lines 1-4).
14. Regarding claim 22, Duke further discloses the vacuum level in the space is set to a first value during a first part of the milking and to a second value during a second part of the milking.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 13, 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosterling WO 98/28969 in view of Ahrweiler WO/0045630.
17. Regarding claim 13, Oosterling discloses a milking machine comprising a first teat cup (1) comprising a teat cup shell (22) and a teat cup liner (23) with the teat cup liner comprising a lower end connecting to a milking vacuum source (V), and a top end forming a space and a teat entrance (Oosterling, Figure 2b) in which a teat of a milking animal is to be introduced, said teat cup liner further comprising an inlet to the space connected to a source (18)(Oosterling, Figure 2a), wherein a control device controls the vacuum in the space in relation to a milking criteria of the animal (Oosterling, page 9: lines 10-13). Not disclosed is a vacuum difference measuring device. Ahrweiler teaches a vacuum difference measuring device (Ahrweiler translation, abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Oosterling with the vacuum difference measuring device of

Ahrweiler as to achieve the predictable benefit of supplying information about pressure in the space, and thereby adjusting the teatcup to prevent creeping.

18. Regarding claim 14, Oosterling further discloses animal identification means provided to detect the identity of a milking animal and relate the identity to at least one milking criteria (Oosterling, page 2: lines 22-26).

19. Regarding claim 24, Oosterling in view of Ahrweiler further discloses the teat cup shell or liner including a sensor (Ahrweiler translation, page 5: lines 10-12).

20. Claims 16, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duke US 2007/0215053 in view of Bosma WO 01/19169.

21. Regarding claim 16, Duke discloses the device of claim 13 but does not disclose the milking criteria being an expected time to finish milking. Bosma teaches a control device controlling a vacuum level in a teat cup in accordance to an expected time to finish (Bosma, page 7: ¶02). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the control of Duke to vary the vacuum in the space in accordance to an expected time to finish milking, as taught by Bosma, so as to ensure that the maximum amount of milk as possible is withdrawn from the teats.

22. Regarding claim 23, Duke discloses the device of claim 13 but does not disclose the vacuum level in the space being set. Bosma teaches the vacuum level being set when the milking animal has a higher milk flow (as best understood) (Bosma, page 7: ¶02). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Duke so that the vacuum level in the space was set when the milking animal had a higher milk flow, as taught by Bosma, so as to ensure that the vacuum was acceptable to draw as much milk from the animal as possible.

23. Regarding claim 26, Duke discloses a milking machine comprising a first teat cup (1) comprising a teat cup shell (2) and a teat cup liner (3) with the teat cup liner comprising a lower end connecting to a milking vacuum source (Duke, ¶0037: line 16), and a top end forming a space (9) and a teat entrance (7) in which a teat of a milking animal is to be introduced, said teat cup liner further comprising an inlet (13) to the space connected to a source (14)(Duke, Figure 2), wherein a control device controls the vacuum in the space in accordance to a milking criteria of the animal (Duke, ¶0008: lines 9-14, ¶0052: lines 1-5). Not disclosed is the milking criteria being an expected time to finish milking. Bosma teaches a control device controlling a vacuum level in a teat cup in accordance to an expected time to finish (Bosma, page 7: ¶002). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the control of Duke to vary the vacuum in the space in accordance to an expected time to finish milking, as taught by Bosma, to ensure that the maximum amount of milk as possible is withdrawn from the teats.

24. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duke US 2007/0215053.

25. Regarding claim 17, Duke discloses the device of claim 13 but does not disclose the milking criteria to be expected milk yield. However, Duke discloses the milking criteria to be milk flow, which can be used to calculate milk yield (Duke, ¶0052: lines 1-5). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Duke so that the milking criteria was the expected milk yield to ensure maximum efficiency of the milking machine.



26. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duke US 2007/0215053 in view of Innings US 2005/0072362.

27. Regarding claim 19, Duke discloses the device of claim 13 but does not disclose the vacuum being set at the start of milking. Innings teaches the vacuum level in the space is set at start of milking. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Duke so that the vacuum was set at the start of milking as to ensure that the vacuum was at a predetermined level deemed acceptable for milking.

### ***Response to Arguments***

28. Applicant's arguments filed 11/02/2009 have been fully considered but they are not persuasive.

29. The vacuum in the space of Duke is still seen as varying due to a momentary milk flow, as described in ¶0052 of Duke.

30. As to the references not disclosing "measuring the vacuum difference between the lower end of the teat cup liner and the space and controlling the vacuum in response to the vacuum difference," these limitations are considered to be functional. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

31. Duke is still seen as disclosing the vacuum difference measuring device.

32. Examiner is unsure of the applicant's arguments towards Ahrweiler. The applicant admits that Ahrweiler determines pressure differences (bottom of page 14, applicant's arguments), and then goes on to say Ahrweiler does not determine (obtain?) a pressure

difference (top of page 15, applicant's arguments). As to the vacuum difference measuring device being provided to adjust a vacuum level in the space during milking, this is considered a functional limitation.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KRISTEN C. HAYES whose telephone number is (571)270-3093. The examiner can normally be reached on Monday-Thursday, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571)272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCH  
4 January 2010

/David Parsley/  
Primary Examiner, Art Unit 3643  
19 January 2010